

WebMeter® Internal Web Server Feature

Several Ethernet-equipped PowerLogic® ION® meters offer WebMeter capability, allowing you to view meter data and perform basic meter configuration using a web browser. The meter can be connected to your corporate Ethernet network, like any other network device, and you can access it with Internet Explorer.

 **NOTE**

Your meter must have its web server enabled for users to view meter data or configure meter settings. See “Enabling/Disabling Meter Web Server Functionality” on page 9 for more information.

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Additional Information

- ◆ Your meter’s technical documentation
- ◆ *ION Reference*

Viewing WebMeter Data on the Internet

With the WebMeter feature, you can view various power measurements over the web, in both HTML and XML formats.

There are two types of web pages you can use to view meter data: default and custom. The default pages display pre-determined sets of values while custom pages can be created to display any values you require.

The default web pages vary slightly from meter to meter. However, typical pages and their displayed values include:

- ◆ **Operation:** real-time voltages, currents, power (kW, kVAR, kVA), power factor and frequency
- ◆ **Consumption:** accumulated energy and peak demand
- ◆ **Power Quality:** voltage and current harmonics and voltage disturbances
- ◆ **Trending & Forecasting:** graphical view of trends and forecasts for selected parameters.

Although you cannot create more default pages, you can make minor alterations to the existing ones.

Viewing Web Pages

See “Setting the default home page” on page 4 for instructions on how to change the default home page.

NOTE

Some meters use frames to organize their web pages. If your meter uses frames, only the IP Address appears in the Address field of the browser, regardless of which page you are currently viewing. To find the full name of a web page in this case, right-click on the main area of the page and select **Properties**. Look at the Address (URL) field to find the name of the web page (with the .html extension), for example, WebPage.html.

Viewing default web pages

1. Start your web browser.
2. Enter the meter’s IP address into the browser’s address field. The default meter home page appears (this varies depending on the meter).

NOTE

Depending on your meter and its security settings, you may be prompted to enter a user name and the meter password. Type them and click **OK**.

3. To view data on other web pages, click the links at the side or top of the page.

To view only one particular page, enter the address of the page and use the .html extension. For example:

`http://10.1.50.42/webpage1.html`.

See “Configuring Your Meter” on page 6 for information on the Setup and Network Setup pages.

Viewing Trending & Forecasting pages

NOTE

To view trending and forecasting pages, your meter must have this feature and you need to install the ActiveX control on your computer. To install the ActiveX control, navigate to /.../ION Setup/ProEssentials Graph Install.exe. Double-click on the file and follow the instructions in the installation wizard. If you do not have ION Setup on your workstation, you can download the file from the Support area of the PowerLogic website.

1. Start your web browser.
2. Enter the meter’s IP address into the browser’s Address field. The default meter home page appears (this varies depending on the meter).
3. Click the Trending & Forecasting link.
4. Select the quantity and the interval you want to view on the graph.

Refer to your meter’s *User Guide* for more information on the web pages associated with the trending and forecasting feature.

Viewing custom web pages

1. Start your web browser.
2. Enter the meter’s IP address into the browser’s Address field. The default meter home page appears (this varies depending on the meter).
3. To view a custom page in HTML, click the links at the side or top of the page.

To view only one particular page, enter the address of the page and use the .html extension. For example:

`http://10.1.50.42/webpage1.html`

4. To view a custom page in XML, enter the address of the page with the .xml extension. For example:

`http://10.1.50.42/webpage1.xml`

5. To view the meter’s catalog XML web page, enter the following address:

`http://<enter meter IP address here>/catalog.xml`

See “Creating Custom Web Pages” on page 4 for information on creating custom web pages.

Setting the default home page

Use ION software to set which web page is the default home page when you connect to the meter.

NOTE

Some meters use frames to organize their web pages. If your meter uses frames, only the IP Address appears in the Address field of the browser, regardless of which page you are currently viewing. To find the full name of a web page in this case, right-click on the page and select **Properties**. Look at the Address (URL) field to find the name of the web page (with the .html extension), for example, WepPage.html. Enter the full name, with the .html extension, in the Default Web Page register.

Using ION Setup

1. Open ION Setup and connect to your meter in Advanced Mode.
2. Navigate to the Comm Module folder and double-click on the Ethernet module in the right-hand pane.
3. Select the **Setup Registers** tab, select the Default Web Page register and click **Edit**.
4. Type the name of the new default home page (including the .html extension) and click **OK**.
5. Click **Send** to save your changes to the meter.

Using ION Enterprise

1. Connect to your meter in Designer and open the **Communications Setup** folder.
2. Right-click in the center of the Ethernet module. The ION Module Setup screen appears.
3. Double-click the Default Web Page setup register and enter the name of the new default home page (including the .html extension).
4. Select **Send & Save** to save your changes to the meter.

Creating Custom Web Pages

The Web Page module is used to create custom pages with parameters that you specify. These pages can be created as either HTML or XML. The XML pages display only XML code in the browser unless they are linked to an XSLT stylesheet.

Custom Web Page Setup

The Web Page module has the following setup registers:

- ◆ **Page Title:** The title (and link text) for the customized web page.
- ◆ **Page Location:** The location (or address) of the web page.
- ◆ **XSLT Stylesheet¹:** The URL where the XSLT stylesheet is located (optional).

- ◆ **Gatewayed Device Namespace¹**: The namespace attribute in the Device element of XML messages generated by the module.
- ◆ **Gatewayed Device Name¹**: The name attribute in the Device element of XML messages generated by the module.
- ◆ **HTML Refresh Rate**: How often (in seconds) the web page is updated or refreshed when viewed in a browser.
- ◆ **HTTP Expires**: The length of time after which the web page expires, in seconds.

¹ These registers only apply to XML web pages

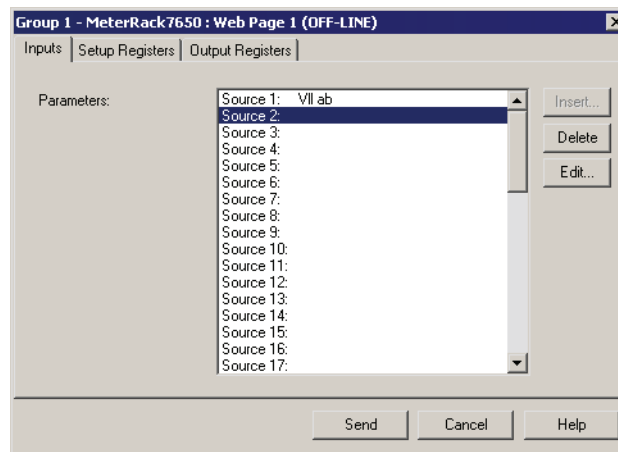
Refer to the *ION Reference* for more information on using the Web Page module.

Creating Custom Web Pages

Use ION software to create custom web pages.

Using ION Setup to create custom web pages

1. Open ION Setup and connect to your meter in Advanced Mode.
2. Navigate to the Web Page Module folder.
3. Select **Insert > Module** and double-click on the Web Page module that appears in the right-hand pane to configure.
4. Select a source and click **Edit** to link the module to the parameters you want to view via the web page.

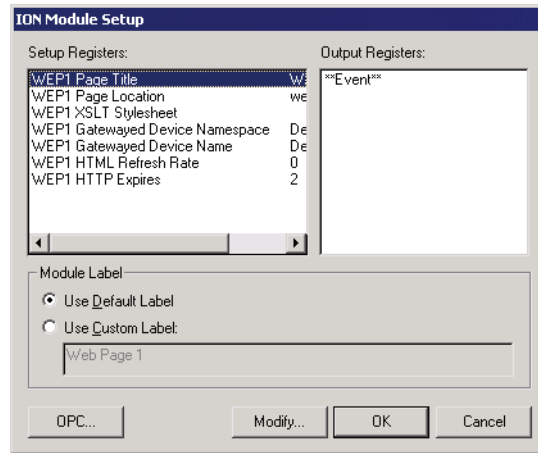


5. On the **Setup Registers** tab, select a register and click **Edit** to configure the module. See “Custom Web Page Setup” on page 4 for a list of setup registers and their functions.
6. Click **Send** to save your changes to the meter.

Using ION Enterprise to create custom web pages

1. Open the meter in Designer.
2. Drag a Web Page module  from the Toolbox.

- Right-click the module to enter setup. See “Custom Web Page Setup” on page 4 for a list of setup registers and their functions,



- ◆ To change the module Label (name) from its default setting, check “Use Custom Label” and enter the new name.
 - ◆ To change a Register Label (name) from its default setting, double-click on the register, check “Use Custom Label” and enter the new name.
 - ◆ To change a Register Value from its default setting, double-click on the register, then enter the new value.
- Link the source inputs of the Web Page module to the outputs of other modules that you want to view via the web page. You can have up to 50 sources per Web Page module.
 - Click **Send & Save** to save your changes to the meter.

Configuring Your Meter

Use the Setup and Network Setup pages to configure your meter via a web browser.

If security is enabled, you must enter a user name and the meter password when you change a parameter. Security is enabled by default. Contact your ION software administrator for a user name and the meter password.

NOTE

If you try to configure a meter when meter configuration via a web browser is disabled, an error message displays. To enable meter configuration via a web browser, see “Enabling/Disabling Meter Web Browser Configuration” on page 8.

Since every meter family has different default web pages, the following instructions may not be exactly the same as for your meter.

Using the Setup Page

Use the setup page to change various power measurement parameters and nameplate information for your meter.

Configuring your meter with the Setup page

1. Start your web browser.
2. Enter the meter's IP address into the browser's Address field. The default meter home page appears.



NOTE

If Advanced Security is enabled on your meter, you must enter a user name and password before the meter home page appears. To configure your meter with a web browser, your user name and password must have "Full Meter Config Access" on the meter.

3. Click the **Setup** link to access the Setup page (or pages).
4. Change the parameters you want to modify. Once you are satisfied with your changes, proceed to step 5.

Undo Changes

To undo your changes, revert to the previous settings by clicking another link on the page and then returning to the Setup page. Using your browser's **Back** button does not undo changes.

5. Click **Save**. Depending on your meter and its security settings, you may need to enter a user name and the meter password. If requested, enter them and click **OK**.

The Setup Confirmation screen appears. This screen shows all the parameters, including your changes.

Using the Network Setup Page

The Network Setup page is available on selected meters. Use the Network Setup page to configure your meter's network settings.



CAUTION

Some changes made to your network settings can result in loss of communication with your meter. Be sure to note existing settings before changing them, in case you need to re-establish communications.

Configuring your meter with the Network Setup page

1. Start your web browser.
2. Enter the meter's IP address into the browser Address field. The default meter home page appears.
3. Click on the **Network Setup** link to access the Network Setup page.
4. Change the parameters you want to modify. Once you are satisfied with your changes, proceed to step 5.

Undo Changes

To undo your changes, revert to the previous settings by clicking another link on the page and then returning to the Network Setup page. Using your browser's **Back** button does not undo changes.

5. Click **Save**. Depending on your meter and its security settings, you may need to enter a user name and the meter password. If requested, enter them and click **OK**.

The Network Setup Confirmation screen appears. This screen shows all the parameters, including your changes.

NOTE

When changing settings on the Network Setup page, there can be a small communication delay with your meter. Wait a few seconds before you attempt to navigate to other pages or make other configuration changes. The length of delay depends on your network configuration and conditions.

Setup Errors

If an error occurs when you attempt to save the new settings to the Setup or Network Setup page, an error message displays. The error message and a brief description of the error display on the confirmation page. Any parameters which are not successfully set are highlighted in red and remain unchanged on the meter.

If you still want to change the parameter values, determine the cause of each error (e.g. incorrect parameter value). Then, using your browser's **Back** button, return to the Setup or Network Setup page and attempt the changes again.

For more information regarding error messages, contact Technical Support.

Enabling/Disabling Meter Web Browser Configuration

Enable and disable web browser configuration of the meter using ION software or the meter's front panel.

Using the front panel

Refer to your meter's *User Guide* for information on how to enable/disable web browser configuration of the meter using the front panel.

Using ION Setup

1. Open ION Setup and connect to your meter in Advanced Mode.
2. Navigate to the Comm Module folder and double-click on the Ethernet module in the right-hand pane.
3. Select the **Setup Registers** tab. Select the Webservice Config Access register and click **Edit**.
4. Select Enabled or Disabled and click **OK**.
5. Click **Send** to save your changes to the meter.

Using ION Enterprise

1. Open the meter in Designer and open the **Communications Setup** folder.
2. Right-click in the center of the Ethernet module. The ION Module Setup screen appears.
3. Double-click the Webserver Config Access setup register and change the value to "Enabled" or "Disabled".
4. Click **Send & Save** to save your changes to the meter.

Enabling/Disabling Meter Web Server Functionality

Enable and disable the web server functionality of the meter using ION software or the meter's front panel.

Using the front panel

Refer to your meter's *User Guide* for information on how to enable/disable web server functionality of the meter using the front panel.

Using ION Setup

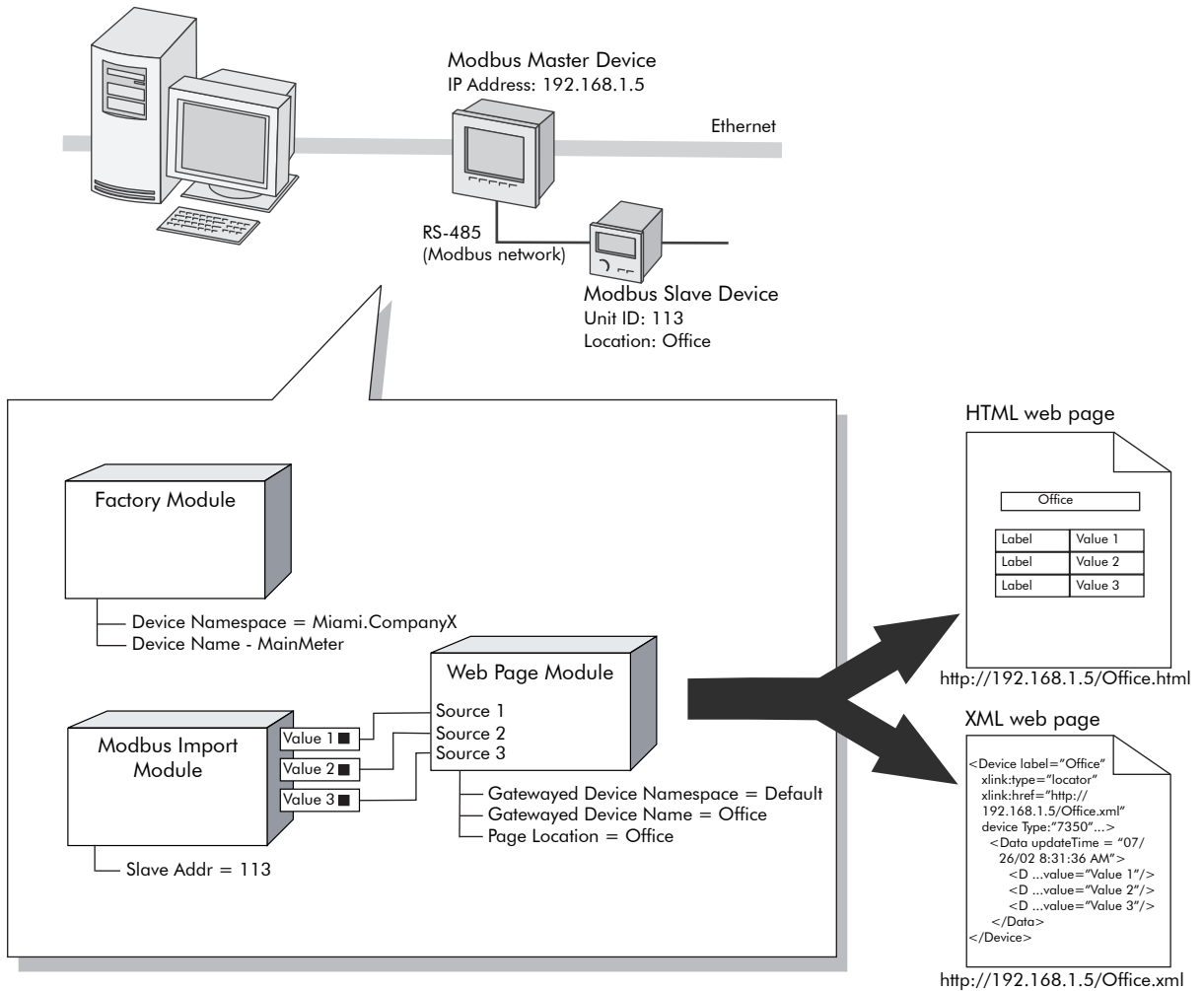
1. Open ION Setup and connect to your meter in Advanced Mode.
2. Navigate to the Comm Module folder and double-click on the Ethernet module in the right-hand pane.
3. Select the **Setup Registers** tab, select the Enable Webserver register and click **Edit**.
4. Select Yes or No and click **OK**.
5. Click **Send** to save your changes to the meter.

Using ION Enterprise

1. Open the meter in Designer and open the **Communications Setup** folder.
2. Right-click in the center of the Ethernet module. The ION Module Setup screen appears.
3. Double-click the Enable Webserver setup register and change the value to "Yes" or "No".
4. Click **Send & Save** to save your changes to the meter.

Using WebMeter in a Modbus Network

Below is a typical application of the WebMeter feature in a Modbus Network.



Hardware

In this example, the ION7550 meter is WebMeter enabled, and is acting as Modbus master to the ION7300 meter (acting as Modbus slave). The IP Address of the ION7550 meter is 192.168.1.5 and it is also connected to the workstation PC via the Ethernet.

The ION7300 meter’s Unit ID is 113 and its location is Office. It is serially connected to the ION7550 meter using RS-485 cable.

Framework

The framework for the ION7550 meter shows how the different modules are configured to produce a custom web page for the ION7300 meter.

Factory Module

The Factory module has been configured so that the setup register *Device Namespace* value is "Miami.CompanyX" and the setup register *Device Name* value is "MainMeter".

Modbus Import Module

Three values (Value 1, 2 and 3) are imported from the ION7300 meter via the Modbus Import module. These values are then linked to the Web Page module for display on the web page. The *Slave Addr* setup register's value is "113" which corresponds to the Unit ID of the Slave meter.

Web Page Module

The Web Page module has Values 1, 2 and 3 for its sources. Setup register *Gatewayed Device Namespace* has a default value which means the register inherits the value from the Factory module's *Device Namespace* setup register. In this example, the value is "Miami.CompanyX".

Setup register *Gatewayed Device Name* value is "Office". This value is important if more than one gatewayed device is sending XML data to the Web Page module. Otherwise, it can be left as default in which case the register inherits the value from the Factory module's *Device Name* setup register. In this example, the value would be "MainMeter".

The value of the *Page Location* setup register is "Office". Since the ION7550 meter's IP Address is 192.168.1.5, the web page for the ION7300 meter is found at: <http://192.168.1.5/Office.html> (or .xml).